

*Mr. L. L. L.*

*Reed*  
*328-2581*  
*work*  
*med section*  
*Home*  
*466-6979*  
*p 5*

## TRACK ALIGNMENT AND TIE REPLACEMENT

In the correcting of a trackage alignment problem, one would remove the spikes holding the area of the rail which is out of alignment. A large pinch bar or track jack would be used in levering the loose rail into a straight or proper alignment. Wooden plugs should be placed into the old spike holes found in each tie where spikes have been removed. While the rail is held in proper alignment with either a pinch bar or track jack, a tie plate should be placed under the rail and new spikes driven into the tie.

When replacing broken or rotten ties, the old tie should be removed and the area under the original tie cleaned and leveled. The new tie is then set in place where the old tie was removed. If the replacement tie has seen service before, all old spike holes should be filled with wooden tie plugs. The tie plate should then be placed between the rail and the tie. A pinch bar, using a rock or tie as a fulcrum, is then used in levering the tie and tie plate flush against the bottom of the rail as the tie is spiked to the rail. Ballast material, dirt and gravel should be packed under the tie. Large rocks as a rule should never be wedged under ties as a form of ballast since they can cause a tie to break when a heavy locomotive or train passes over the rail.

## TRACKAGE CONDITIONS-HEBER CITY TO VIVIAN PARK

The present section of trackage between Heber City depot and the start of the 90 pound rail is sound enough to pass equipment into Heber City on a slow order 15 to 20 miles per hour.

The basic problems with the 2 1/2 miles of trackage from the Heber City depot and the start of the 90 pound rail are in areas of alignment and replacing missing, rotten, or broken ties. The alignment situation is found when the trackage is not in proper gauge 4' 8 1/2". The alignment of rail joints so that they run straight is the largest aspect of alignment problems on the 2 1/2 miles in question.

Replace 5 ties at first grade crossing south of garment plant.

Replace 4 ties at second grade crossing south of garment plant.

At milepost 26 1/2 ballast over wooden culvert. Track gives under weight of engine when crossing culvert. Culvert is approximately 24" wide. Place tie over wooden culvert and ballast would be a possible solution.

Milepost 25 1/2 ballast under tie over wooden culvert.

On the 2 1/2 mile section replace about 5 or 6 broken ties.

90 pound rail:

Replace 5 missing ties at first crossing on 90 pound rail south of Heber City.

Replace 11 ties half mile east of first trestle over Provo River.

Replace missing spikes, hammer down loose spikes.

Ballast trackage on both sides of trestle going over Snake Creek.

Charleston Siding:

Replace Ties:

Switch ties	3	15 ft. long 8"X8"
Switch ties	2	14 ft. long 8"X8"
Standard ties (Main line)	6	

Red cut on 90 pound rail

Cut #1 okay

Cut face #2 Minor clearing of rocks and dirt on embankment to west of tracks.  
Clearance required 24" from rail

Cut face #3 Okay-Good area to obtain ballast.

Cut face #4 Clear embankment back to 24". Minor dirt and rocks

Milepost 22

Minor leveling just south of milepost 22.

Cut face #1 South of milepost #22

Remove dirt and rocks from track side area. Clearance of 24" needed.

Cut face #2 Okay

Cut face #3 Okay

Milepost 21

Cut #1 Minor rocks on west side of tracks.

Cut #2 Okay

Dutchman's Hollow Okay

Cut #3 Just north of milepost 20, remove rocks.

Milepost 20

Loose spikes milepost 19 3/4

Milepost 19

Cut #1 Okay

Milepost 18 1/2

✓ Cinder fill needs leveling before official operation starts in 1971.

✓ Six rail lengths long, about 190 feet, with 12" to 14" drop.

Remove dirt slide 24 inches back from trackage just south of cinder fill.

Milepost 18 1/4

✓ Remove large rocks from side of tracks. Must be done for steam locomotives to pass. 11-16-70 + 11-14-70

✓ Kink in rail just north of milepost 18. done - Rail Replaced

Milepost 18

✓ Deep dip in trackage 18 to 20 inches deep.

*Tamp ties*

done 11-10-70

Jack trackage up, reballast, tamp ties with ballast, lower trackage. Fill enough ballast under trackage to make it level. Large rocks should be placed along the lake side of the trackage across the face of the cinder fill. At a later date, the railroad bed should be moved about six feet to the north. This relocation could be accomplished with one rail length added to each rail.

Wallsburg Siding (at dam)

Remove rocks from passing track. Uncover east switch stand on siding.

Milepost 17

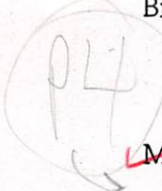
Milepost 16 1/2

Large curve just west of Deer Creek Dam needs ballast replaced.

Cut face Remove rocks from tracks

Bridge over US 189


Nail board on side of bridge to keep ballast from falling on to the highway.

 Milepost 16 Rough trackage (roller coaster)

11-9-70 & 11-10-70

✓ Jack track up and tamp present ballast under ties. Re-align track in worst areas.

Milepost 15 Cut brush back

 Milespost 14 1/2

Dig out drainage ditch at Water Crest Spring area. Cut embankment back for drainage.

Cut brush back

Milespost 14+ Clear rocks and dirt

Milespost 14

Milespost 13 1/2 Bridge over Provo River

Replace bridge ~~12~~ 15 ties-10' X 8" X 8"

Death Rock just west of bridge

Remove rocks, dirt and dangerous rock formation on south side of trackage

Milepost 13 1/4

Clear rocks and dirt on second cut face south of Death Rock Bridge.

Milepost 13 Wildwood

Clear rocks and dirt from track. This area is minor.

Milepost 12 3/4

Clear minor rocks

winrow-

Milepost 12 1/2+ Ballast track

Milepost 12 1/2 Align rail joints

Milepost 12 Vivian Park

10 missing ties-Road bed washed away on river side of tracks. Cut out slot under

existing ties. Place old railroad ties in slots as cribbing to hold ballast in place. Cribbing ties under the trackage could be held in place with pipes driven into ground. Rocks and ballast placed over ties should be tamped.

### TIE COUNT

#### Special Ties needed

##### Charleston Siding:

3	15 feet	switch ties	8" X 8"
2	14 feet	switch ties	8" X 8"

#### Bridge ties Milepost 13 1/2

~~12~~ <sup>15</sup> bridge ties      10 feet long      8" X 8"

#### Area between Milepost 16 and 15 (roller coaster area)

20 ties will be needed when track is jacked up and leveled.

155 ties needed to replace broken and rotten ties between Vivian Park and Heber City.

175 standard railroad ties needed for replacement.

*11-17-70 All longer ties ordered.*

*Standard  
8x8x8 300 ea*

*special*

16,000

100  
100  

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16,000-

20,000

100000  
3

24,000